

Appl. No. 09/892,397
Amdt. dated 12/8/2004
Reply to the Office Action of 09/08/2004

REMARKS/ARGUMENTS

Reexamination and reconsideration of this application as amended is requested. By this amendment, Claims 1, 14, 18, and 22, have been amended. After this amendment, Claims 1-26 remain pending in this application.

Claim Rejections - 35 USC § 112

(2-3) The Examiner rejected Claims 14-21 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

Applicants have amended Claims 14 and 18 to more clearly and affirmatively recite the present invention. Amended Claims 14 and 18 more clearly and affirmatively recite that "an apparatus" and "a printing system" respectively, comprise, among other things, a triggering event detector, communicatively coupled to the data embedding application and the controller/processor unit, for the printhead printing the print data in a visible image comprising the embedded data in response to the triggering event detector detecting a triggering event [at the apparatus], wherein the perceptual print quality of the print data in the visible image remains substantially unaffected and the embedded data is substantially unperceivable to a person's naked eye. Support for this amendment may be found in the specification as originally filed, see for example FIG. 5; page 8, lines 15-20; page 9, lines 1-3 and 18-20; and page 10, lines 1-2. No new matter was added.

In view of the amendment to Claims 14 and 18 and the remarks above, Applicants believe that the rejection of Claims 14 and 18, under 35 U.S.C. § 112, second paragraph, as discussed above, has been overcome. Applicants request that the Examiner withdraw the rejection of Claims 14 and 18.

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Claim Rejections - 35 USC § 102

(4-5) The Examiner rejected Claims 1, 5, 8-10, 12, 22, and 26 under 35 U.S.C. 102(e) as being anticipated by Horigane U.S. App. No. 2001/0006585. This rejection is respectfully traversed.

Applicants have amended independent Claims 1 and 22 to more clearly and distinctly recite the present invention. Applicants have amended Claims 1 and 22 to more clearly recite "printer configuration data". Applicants have also amended Claim 1 to more clearly and distinctly recite "the perceptual print quality of the print data in the visible image remains substantially unaffected and the embedded encoded configuration data is substantially unperceivable to a person's naked eye". Amended Claim 22 similarly recites the same. Support for these amendments may be found in the specification as originally filed, see for example FIG. 5; page 8, lines 15-20; page 9, lines 1-3 and 18-20; and page 10, lines 1-2. No new matter was added.

Horigane teaches a printing system for printing application data instructed to be printed from an application at a printer. The printing system comprises an application, a user input section, print parameters of the electronic file (printer control information), a virtual printer driver, a printer driver, and the printer. The user input section allows a user to enter print conditions of coded data to obtain machine-readable code embedded in code data of an electronic file instructed to be printed by the application.

To print any electronic file created by the application from the application in the printing system, Horigane teaches that the user issues an instruction for printing the electronic file to be printed and the print conditions. The print conditions include various pieces of information of paper size and orientation, enable or disable of N-up print and scaled printing, and margin information in addition to coded data to obtain machine-readable code embedded in the data of the electronic file instructed to be printed.

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As discussed above, the user also enters the data to be coded as machine readable code, and then the machine-readable code is embedded in a first intermediate data that was generated in the virtual print driver. The embedding occurs within the virtual printer driver.

Next, a print data generating section reproduces a Graphic Device Independent (GDI) command string from the data stored in a second intermediate data on a data storage section and sends the GDI command string as print data together with the print instruction to the printer driver. Horigane also teaches that the machine-readable code may be sent as a GDI command string in processing of sending a print instruction to the printer driver.

Horigane teaches that bar code, data griff, etc., can be used as the machine-readable code embedded and printed in the printing system. A registration ID used when an electronic file to be printed is registered in a server is possible as the machine-readable code content. Additionally, various pieces of information such as the identifier of a printed electronic file, the name of the host device supplying the electronic file, the name of the OS or user creating the electronic file, and the print date and the number of pages of the electronic file may also be used as machine readable code. Further, a character string such as "important" or "confidential" can also be watermarked in the electronic file printed on output paper.

The printing system taught by Horigane is constituted such that the virtual printer driver is placed on an interface between the application and the printer driver, and the virtual printer driver generates intermediate data to allow GDI code to be reproduced from application data instructed to be printed from the application. Further, the virtual printer driver reproduces GDI code based on the intermediate data for generating print data, and then feeds the print data into the printer driver. The virtual printer driver placed on the interface enables any printers to print out in various modes of machine-readable code embedding and printing, N-up print, scaled print, etc., from every application

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having a print function.

In contrast, as now recited for amended Claim 1 and similarly for amended Claim 22, the presently claimed invention recites that an embedding algorithm is triggered in response to a triggering event. The present invention also recites that print data is received and printer configuration data is read and encoded. The present invention further recites that the encoded configuration data is embedded into the print data and the print data is sent to a printhead. The print data is printed as a visible image comprising the embedded configuration data. The perceptual print quality of the print data in the visible image remains substantially unaffected and the embedded encoded configuration data is substantially unperceivable to a person's naked eye.

Horigane does not teach or anticipate that the perceptual print quality of the print data in the visible image remains substantially unaffected and the embedded encoded configuration data is substantially unperceivable to a person's naked eye. In fact, Horigane teaches away from the above. More specifically, Horigane teaches merging machine readable code into print data, thereby affecting the print data by producing output with visible machine readable code (See for example, FIG. 7; page 1, paragraph 13; page 2, paragraph 20; page 3, paragraphs 47-48; page 4, paragraphs 68-69; page 5, paragraphs 70, 72-73; and page 6, paragraph 98).

The Examiner directs the Applicants to FIG. 7; page 1, paragraph 8; and page 5, paragraph 70 where Horigane teaches that the print data is noticeably changed with the inclusion of the machine readable code, which can be perceived by a person. Therefore, Horigane does not teach, anticipate, or suggest that the perceptual print quality of the print data in the visible image remains substantially unaffected and the embedded encoded configuration data is substantially unperceivable to a person's naked eye, as recited for independent Claims 1 and 22, and for all dependent claims depending therefrom, respectively.

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Claims 5, 8-10, 12, and 26 depend from Claims 1 and 22 respectively, either directly or by way of an intervening claim, and since dependent claims recite all of the limitations of the independent claim; it is believed that, therefore, claims 5, 8-10, 12, and 26 also recite in allowable form.

Therefore, in view of the amendments and remarks above, Applicants believe that since Horigane does not teach, anticipate, or suggest, inter alia, the presently claimed "the perceptual print quality of the print data in the visible image remains substantially unaffected and the embedded encoded configuration data is substantially unperceivable to a person's naked eye", the rejection of Claims 1, 5 8-10, 12, 22, and 26 under 35 U.S.C. 102(e) as being anticipated by Horigane has been overcome. The Examiner should withdraw the rejection of these claims.

(6) The Examiner rejected Claims 14-21 under 35 U.S.C. 102(e) as being anticipated by Wasilewski U.S. App. No. 2002/0120944. This rejection is respectfully traversed.

Submitted with this Response is a Declaration under 37 C.F.R. § 1.131, executed by the Applicants of the instant application, and associated evidence, to establish that the invention claimed in the instant application was reduced to writing in the United States prior to February 23, 2001. Thus, the invention claimed in the present application was invented prior to February 23, 2001.

The Wasilewski reference cited by the Examiner was filed in the U.S. Patent and Trademark Office on February 23, 2001, which is after the date of invention of the invention claimed in the instant application. Accordingly, the Wasilewski reference is removed as available prior-art references and cannot be cited against the present application in a rejection under 35 U.S.C. § 102.

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Therefore, it is respectfully submitted that the rejection of Claims 14-21, under 35 U.S.C. 102(e) should be withdrawn. However, additional remarks are given below with respect to Claims 14 and 18 and the above cited reference.

As discussed above, Applicants have amended Claims 14 and 18 to more clearly and affirmatively recite the present invention. Amended Claims 14 and 18 more clearly recite "a data embedding application, for embedding data in print data". Claims 14 and 18 also more clearly and affirmatively recite that "an apparatus" and "a printing system" respectively, comprise, among other things, a triggering event detector, communicatively coupled to the data embedding application and the controller/processor unit, for the printhead printing the print data in a visible image comprising the embedded data in response to the triggering event detector detecting a triggering event, wherein the perceptual print quality of the print data in the visible image remains substantially unaffected and the embedded data is substantially unperceivable to a person's naked eye. Support for these amendments may be found in the specification as originally filed, see for example FIG. 5; page 6 line 18; page 8, lines 15-20; page 9, lines 1-3 and 18-20; and page 10, lines 1-2. No new matter was added.

Wasilewski teaches a device that allows a subscriber to simply press a designated button on a remote control, thereby printing data that can be either displayed along with the event on a presentation device, such as a television, or not shown and embedded within the event that is available for printing to a connected printer.

The transport stream associated with an event that is being shown on the television screen includes the data portion along with the video and audio portions in a typical cable television system. A receiver, which acts as a decoder, decodes the transport stream by identifying the packet identifiers (PIDs) associated with the program. Once the print button is activated and received in the infrared (IR) receiver, the processor diverts the data packets with the identified PID to have the headers removed by the usual process either by a demultiplexer/decoder or by the set-top receiver processor. The

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resulting data is then rendered into printable format, which may differ from the format used for display on a television screen, and the printable format is then sent to the printer output port.

In contrast, as recited for Claim 14 and similarly for Claim 18, the presently claimed invention recites a data embedding application, for embedding data in print data. The present invention also recites a controller/processor unit that is communicatively coupled to the data embedding application. A data memory and print engine are communicatively coupled to the controller/processor unit. A printhead is communicatively coupled to the print engine. The present invention further recites a triggering event detector, which is communicatively coupled to the data embedding application and the controller/processor unit, for the printhead printing the print data as a visible image. The printhead prints the data as a visible image, which comprises the embedded data, in response to the triggering event detector detecting a triggering event. The perceptual print quality of the print data in the visible image remains substantially unaffected and the embedded data is substantially unperceivable to a person's naked eye.

Wasilewski does not teach or anticipate printing a visible image, wherein the embedded data is substantially unperceivable to a person's naked eye. In fact, the main focus of Wasilewski is to allow a person to view embedded data included with an event either on a display or via a printer (See for example, Abstract; Fig. 7; page 1, paragraph 12; page 4, paragraph 49; and page 5, paragraphs 53-57). The Examiner directs Applicants to Figure 6, the Abstract, and paragraphs 52-54 where Wasilewski teaches that embedded data (which is embedded by the cable or satellite company and not Wasilewski) within an event can be printed out at a printer or on a display by pressing a button on a remote control device. Therefore, Wasilewski does not teach, anticipate, or suggest printing a visible image comprising embedded data that is unperceivable to a person's naked eye, as recited for Claims 14 and 18, and for all dependent claims depending therefrom, respectively.

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Claims 15-17 and 19-21 depend directly from Claims 14 and 18 respectively, and since dependent claims recite all of the limitations of the independent claim; it is believed that, therefore, claims 15-17 and 19-21 also recite in allowable form.

Therefore, in view of the amendments and remarks above, Applicants believe that since Wasilewski does not teach, anticipate, or suggest, *inter alia*, the presently claimed "printing the print data as a visible image comprising the embedded data in response to the triggering event detector detecting a triggering event at the apparatus, wherein the perceptual print quality of the print data in the visible image remains substantially unaffected and the embedded data is substantially unperceivable to a person's naked eye", the rejection of Claims 14-21 under 35 U.S.C. 102(e) as being anticipated by Wasilewski has been overcome. The Examiner should withdraw the rejection of these claims.

(7) Applicants have reviewed Fawcett et al. (U.S. Pat. No. 5,678,002), Gauthier et al. (U.S. Pat. No. 5,833,375), Shaw et al. (U.S. Pat. No. 5,960,168), Sperry et al. (U.S. Pat. No. 5,995,723), Kim (U.S. Pat. No. 6,009,243), Payne et al. (U.S. Pat. No. 6,091,506), Payne (U.S. Pat. No. 6,115,131), Nakatsuma et al. (U.S. Pat. No. 6,115,132), Mastie et al. (U.S. Pat. No. 6,145,031), Yokoyama (U.S. Pat. No. 6,166,826), Ha (U.S. Pat. No. 6,178,003), Sakai et al. (U.S. Pat. No. 6,184,995), and Mizutani et al. (U.S. Pat. No. 6,195,170) and believe that each of the cited references alone or in any combination, and including any combination with Horigane and/or Wasilewski, do not teach, anticipate, or suggest the presently claimed invention.

Allowable/Allowed Subject Matter

(1) The Examiner objected to Claims 2-4, 6-7, 11, 13, and 23-25, as being dependent on a rejected base claim, but indicated that these claims would be allowable if rewritten in independent form including all limitations of the base claim and any intervening

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claims.

In view of the amendment and remarks above, Applicants believe that Claims 2-4, 6-7, 11, 13, and 23-25 now recite in allowable form. Accordingly, Applicants request that the Examiner withdraw the objection to these claims.

Conclusion

The foregoing is submitted as full and complete response to the Official Action mailed September 8, 2004, and it is submitted that Claims 1-26 are in condition for allowance. Reconsideration of the rejection is requested. Allowance of Claims 1-26 is earnestly solicited.

No amendment made was related to the statutory requirements of patentability unless expressly stated herein. No amendment made was for the purpose of narrowing the scope of any claim, unless Applicants have argued herein that such amendment was made to distinguish over a particular reference or combination of references.

Applicants acknowledge the continuing duty of candor and good faith to disclosure of information known to be material to the examination of this application. In accordance with 37 CFR §§ 1.56, all such information is dutifully made of record. The foreseeable equivalents of any territory surrendered by amendment are limited to the territory taught by the information of record. No other territory afforded by the doctrine of equivalents is knowingly surrendered and everything else is unforeseeable at the time of this amendment by the Applicants and the attorneys.

The present application, after entry of this amendment, comprises twenty-six (26) claims, including four (4) independent claims. Applicants have previously paid for twenty-six (26) claims including four (4) independent claims. Applicants, therefore, believe that a fee for claims amendment is currently not due.

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If the Examiner believes that there are any informalities that can be corrected by Examiner's amendment, or that in any way it would help expedite the prosecution of the patent application, a telephone call to the undersigned at (561) 989-9811 is respectfully solicited.

The Commissioner is hereby authorized to charge any fees that may be required or credit any overpayment to Deposit Account 50-0563.

In view of the preceding discussion, it is submitted that the claims are in condition for allowance. Reconsideration and re-examination is requested.

Respectfully submitted,

Date:

12/8/04

By:

Jose Gutman

Jose Gutman
Reg. No. 35,171

Customer No. 23334
FLEIT, KAIN, GIBBONS, GUTMAN
BONGINI & BIANCO P.L.
551 N.W. 77th Street, Suite 111
Boca Raton, FL 33487
Tel (561) 989-9811
Fax (561) 989-9812